

### REMARKS

Claims 1, 5, 8 and 12 have been amended. Claims 4 and 11 have been canceled. New claims 18 and 19 have been added. Thus, claims 1, 5-8, 12-14, 18 and 19 are now presented for examination. Support for new claims 18 and 19 may be found in the specification at page 10, lines 14-17. Thus, no new matter has been added. Reconsideration and withdrawal of the present rejections in view of the comments presented herein are respectfully requested.

#### Obviousness-type double patenting

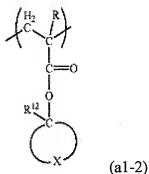
Claims 1-17 were rejected on the ground of nonstatutory obviousness-type double patenting as allegedly being unpatentable over claims 1-17 of commonly owned, copending Application No. 11/628,172. As noted in the Office Action at paragraph 24, a Terminal Disclaimer was submitted with Applicants' RCE filed on June 1, 2009. However, as noted by the Examiner, this disclaimer contained an incorrect application number for the application being disclaimed, and was not entered. Enclosed herewith is a Terminal Disclaimer with the correct application number, thus overcoming this rejection.

#### Rejection under 35 U.S.C. 103(a)

Claims 1, 4-8 and 11-14 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Sato (Japanese Patent Application No. 2003/223001, and machine English translation).

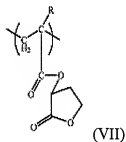
Claim 1 as amended recites a resin for a resist, consisting of structural units (a1) derived from an ( $\alpha$ -lower alkyl)acrylate ester comprising an acid dissociable, dissolution inhibiting group, structural units (a2-1) derived from an ( $\alpha$ -lower alkyl)acrylate ester comprising a lactone-containing monocyclic group, and structural units (a3) derived from an ( $\alpha$ -lower alkyl)acrylate ester that comprises a polar group-containing aliphatic hydrocarbon group, wherein

said structural units (a1) comprise structural units (a1-2) represented by general formula (a1-2) shown below:



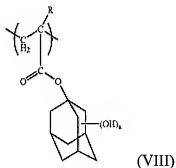
(wherein, R represents a hydrogen atom or a methyl group, R<sup>12</sup> represents an ethyl group, and X represents a group which, in combination with a carbon atom to which said group R<sup>12</sup> is bonded, forms a group in which one hydrogen atom has been removed from a cyclohexyl group),

said structural units (a2-1) are structural units represented by general formula (VII) shown below:



(wherein, R represents a hydrogen atom or a methyl group), and

said structural units (a3) are structural units represented by general formula (VIII) shown below:



(wherein, R represents a hydrogen atom or a methyl group; and n represents an integer of 1, and the hydroxyl group is bonded to position 3 of the adamantyl group).

At paragraph [0009], Sato states that "Resins containing an acid decomposable group conventionally used in a photoresist for exposure with a far-ultraviolet ray typically includes a cyclic aliphatic hydrocarbon in a molecule together with the acid decomposable group. However, such resins have many problems which have not been solved." Sato describes a positive resist composition including: a resin which exhibits increased solubility in an alkali developing solution under action of an acid; and a compound which generates an acid upon exposure of active light or a radiation, wherein the resin includes a structural unit (A1) represented by the general formula (I) and a structural unit (A2) which contains -COOR within the side chain thereof (wherein, R represents a hydrocarbon group containing an aliphatic cyclic group; and when the carbon atom of R bonded to the -COO group is a tertiary carbon atom, R represents a non-acid decomposable hydrocarbon group which contains an aliphatic cyclic group).

Sato describes various examples for each of the structural unit (A1) containing an acid decomposable group and other structural units, but does not describe specific resins which meet the limitations of claim 1. Also, the invention of Sato includes a structural unit containing a -COOR group as an indispensable component, which is not included in present claim 1.

At paragraphs [0011] and [0012], Sato states that:

The inventors of the present application studied materials for chemically amplified positive resist composition to the best of their abilities, and as a result, found that the object of the present invention could be attained by the following constitution.

(1) A positive resist composition including: a resin which exhibits increased solubility in an alkali developing solution under action of an acid; and a compound which generates an acid upon exposure of active light or a radiation, wherein the resin includes a structural unit (A1) represented by the general formula (I) and a structural unit (A2) which contains -COOR within the side chain thereof (wherein, R represents a hydrocarbon group containing an aliphatic cyclic group; and when the carbon atom within R bonded to the -COO group is a tertiary carbon atom, R represents a non-acid decomposable hydrocarbon group which contains an aliphatic cyclic group). (Emphasis added).

Thus, the presence of the structural unit (A1) represented by the general formula (I) and the structural unit (A2) containing a group of -COOR is essential to the invention of Sato. In the structural unit (A2), R does NOT represent an acid decomposable group, as described above. Therefore, the essential structural unit (A2) of Sato does not correspond with any of the structural units (a1), (a2-1) and (a3) recited in present claim 1. Because claim 1 recites "consisting of"

language, it does not read on the structural unit (A2) of Sato. Because the structural unit (A2) is essential to the resin of Sato, one of ordinary skill in the art would certainly not modify or delete this structural component from this resin.

The presence of structural units (a1), (a2-1) and (a3) as recited in claim 1 also results in unexpected advantages of the resin which are neither taught nor suggested by Sato et al. Based on the presence of these structural units, the resulting resist pattern excels in depth of focus (DOF), mask error factor (MEF) and line edge roughness (LER). The effects attained by the presence of only structural units (a1), (a2-1) and (a3), without including other structural units such as the structural unit (A2) of Sato, is shown in the Examples of present application. These unexpected results could not have been predicted based on Sato et al., and strongly support the nonobviousness of present claims 1, 5-7 and 18..

The same arguments provided above also apply to the patentability of claims 8, 12-14 and 19. Claim 8 recites that the resin consists of structural units (a1), (a2) and (a3). Thus, this resin does not include the essential (A2) structural unit disclosed by Sato et al, nor would one of ordinary skill modify or remove the (A2) structural unit since it is disclosed to be essential to the invention of Sato. In addition, the same unexpected results discussed above also apply to claims 8, 12-14 and 19 (formation of a resist pattern which excels in DOF, MEF and LER) as shown in the Examples in the present specification, and in the Rule 132 Declaration of Hideo Hada submitted with the RCE on June 1, 2009.

In view of the comments presented above, Applicants respectfully request reconsideration and withdrawal of the rejections under 35 U.S.C. §103(a).

#### **No Disclaimers or Disavowals**

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not

reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

**CONCLUSION**

Applicants submit that all claims are in condition for allowance. However, if minor matters remain which could be resolved by telephone, the Examiner is invited to contact the undersigned at the telephone number provided below. If any additional fees are required, please charge these to Deposit Account No. 11-1410. Should there be any questions concerning this application, the Examiner is respectfully invited to contact the undersigned at the telephone number appearing below.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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